

What is claimed is:

1. A method of driving a display device by constructing one frame with a plurality of subframes, for displaying an input image that moves on a display panel, wherein:

the method assumes a specific pixel on a retina that is formed on the retina based on the input image, and controls light emission of each subframe such that luminance of the specific pixel on the retina becomes substantially equal to luminance of a pixel corresponding to the input image.

2. The method of driving a display device as claimed in claim 1, wherein the method controls the light emission of each subframe based on a move direction and a speed of motion of the input image that moves on the display panel.

3. The method of driving a display device as claimed in claim 2, wherein the method assumes tracks of each pixel formed on the retina based on move of the input image, and controls the light emission of each subframe corresponding to the tracks substantially included in an area of the specific pixel on the retina.

4. The method of driving a display device as claimed in claim 3, wherein light emission of the specific pixel on the retina is the light emission of subframes, included in the tracks of the specific pixel on the retina or adjacent or neighboring pixels on the retina, and corresponding to the tracks substantially included in the area of the specific pixel on the retina.

5. The method of driving a display device as claimed in claim 3, wherein a pitch of pixels on the retina in the light emission area of each subframe that is used for displaying the specific pixel on the retina, is made shorter than a pitch of pixels on the display panel.

6. The method of driving a display device as claimed in claim 5, wherein the pitch of the pixels on

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the retina are selected as one half of the pitch of the pixels on the display panel.

5 7. The method of driving a display device as claimed in claim 6, wherein when one frame of the pixels on the retina is constructed of N subframes, two sets of the N subframes are provided per one frame period, for the pixels on the display panel.

10 8. The method of driving a display device as claimed in claim 7, wherein one set of the N subframes are provided for each of a front half and a latter half of the one frame period, for the pixels on the display panel.

15 9. The method of driving a display device as claimed in claim 5, wherein the pitch of the pixels on the retina is limited by the speed of motion of the image that moves on the display panel, and number of redundant light-emitting blocks of subframes that constitute the one frame.

20 10. The method of driving a display device as claimed in claim 9, wherein the redundant light-emitting blocks are selected based on light-emitting blocks located either at the near of or far from one end of the specific pixel on the retina, with priority.

25 11. The method of driving a display device as claimed in claim 9, wherein the redundant light-emitting blocks are selected based on light-emitting blocks located either at the beginning or at the end of one frame period for displaying the specific pixel on the retina, with priority.

30 12. The method of driving a display device as claimed in claim 1, wherein the light emission of the subframes is controlled such that luminous colors of the specific pixel on the retina become substantially equal to luminous colors of the corresponding pixel in the input image.

35 13. A display device displaying an input image that moves on a display panel by constructing one frame with a

plurality of subframes, comprising:

an assuming unit assuming a specific pixel on a retina that is formed on the retina based on the input image; and

5 a control unit controlling light emission of each subframe such that luminance of the specific pixel on the retina becomes substantially equal to luminance of a pixel corresponding to the input image.

10 14. The display device as claimed in claim 13, wherein the control unit controls the light emission of each subframe based on a move direction and a speed of motion of the input image that moves on the display panel.

15 15. The display device as claimed in claim 14, wherein the assuming unit assumes tracks of each pixel formed on the retina based on move of the input image, and the control unit controls the light emission of each subframe corresponding to the tracks substantially included in an area of the specific pixel on the retina.

20 16. The display device as claimed in claim 15, wherein light emission of the specific pixel on the retina is the light emission of subframes, included in the tracks of the specific pixel on the retina or adjacent or neighboring pixels on the retina, and
25 corresponding to the tracks substantially included in the area of the specific pixel on the retina.

30 17. The display device as claimed in claim 15, wherein a pitch of pixels on the retina in the light emission area of each subframe that is used for displaying the specific pixel on the retina, is made shorter than a pitch of pixels on the display panel.

35 18. The display device as claimed in claim 17, wherein the pitch of the pixels on the retina are selected as one half of the pitch of the pixels on the display panel.

19. The display device as claimed in claim 18, wherein when one frame of the pixels on the retina is

constructed of N subframes, two sets of the N subframes are provided per one frame period, for the pixels on the display panel.

5 20. The display device as claimed in claim 19, wherein one set of the N subframes are provided for each of a front half and a latter half of the one frame period, for the pixels on the display panel.

10 21. The display device as claimed in claim 17, further comprising a limiting unit limiting the pitch of the pixels on the retina by the speed of motion of the image that moves on the display panel, and number of redundant light-emitting blocks of subframes that constitute the one frame.

15 22. The display device as claimed in claim 21, further comprising a selecting unit selecting the redundant light-emitting blocks based on light-emitting blocks located either at the near of or far from one end of the specific pixel on the retina, with priority.

20 23. The display device as claimed in claim 21, further comprising a selecting unit selecting the redundant light-emitting blocks based on light-emitting blocks located either at the beginning or at the end of one frame period for displaying the specific pixel on the retina, with priority.

25 24. The display device as claimed in claim 13, wherein the control unit controls the light emission of the subframes such that luminous colors of the specific pixel on the retina become substantially equal to luminous colors of the corresponding pixel in the input image.

30 25. The display device as claimed in claim 13, wherein slits are provided at light-extracting portions of each light-emitting cell that constitutes the display panel, thereby to limit the effective area of the light-extracting portions.

35 26. The display device as claimed in claim 25, wherein the slits are formed substantially in a

horizontal direction with respect to the light-emitting cells.

27. The display device as claimed in claim 25,
wherein the slits are formed substantially in a vertical
5 direction with respect to the light-emitting cells.

28. The display device as claimed in claim 25,
wherein the slits are formed in a cross shape by
combining substantially horizontal and vertical
directions with respect to the light-emitting cells.

29. The display device as claimed in claim 13,
wherein a light-shielding dielectric is provided on a
substrate in order to form the slits, the light-shielding
dielectric has black color at an observer side, and the
light-shielding dielectric has white color at a side
15 opposite to the observer side.

30. The display device as claimed in claim 29,
wherein an ultraviolet-ray excitation phosphor is coated
on an inner wall surface of the light-shielding
dielectric.

31. The display device as claimed in claim 13,
wherein the display device is a plasma display device.

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